

Title (en)

DEVICE FOR PRECISE RELATIVE ADJUSTMENT OF A MASK AND A SEMICONDUCTOR WAFER IN A LITHOGRAPHY APPARATUS AND METHOD FOR ITS USE

Publication

**EP 0253349 A3 19880720 (DE)**

Application

**EP 87110093 A 19870713**

Priority

DE 3623891 A 19860715

Abstract (en)

[origin: US4825086A] An arrangement and method for the exact, mutual alignment of a mask and a semiconductor wafer in a lithographic apparatus so that the mask and wafer are in a plane extending perpendicular to the particle beam. The apparatus includes a seating arrangement for the mask having a first retaining part and arrangement for positioning this first retaining part relative to a table which allows adjusting the plane of the first retaining part. The apparatus also includes a second retaining part for securing the wafer thereto, which second retaining part is mounted on the plate by an arrangement that allows adjusting the plane of the second retaining part relative to the axis so that the surface of the semiconductor wafer can also be placed in a plane extending perpendicular to the beam direction.

IPC 1-7

**G03F 9/00**; **G03F 7/20**

IPC 8 full level

**G03F 7/20** (2006.01); **G03F 9/00** (2006.01); **H01L 21/027** (2006.01); **H01L 21/30** (2006.01); **H01L 21/68** (2006.01)

CPC (source: EP US)

**G03F 7/70691** (2013.01 - EP US); **G03F 9/70** (2013.01 - EP US)

Citation (search report)

- [A] PATENT ABSTRACTS OF JAPAN, Band 7, Nr. 204 (E-197)[1349], 9. September 1983; & JP-A-58 103 136 (NIHON KOUGAKU KOGYO K.K.) 20-06-1983
- [A] PATENT ABSTRACTS OF JAPAN, Band 8, Nr. 169 (P-292)[1606], 4. August 1984; & JP-A-59 65 706 (HITACHI SEISAKUSHO K.K.) 14-04-1984
- [AD] IBM TECHNICAL DISCLOSURE BULLETIN, Band 25, Nr. 12, Mai 1983, Seiten 6400-6401, New York, US; G.A. FOLCHI et al.: "X-ray lithography mask alignment stage"
- [AD] J. VAC. SCI. TECHNOL. B, Band 3, Nr. 1, Januar/Februar 1985, Seiten 241-244, American Vacuum Society; K.-H. MÜLLER et al.: "Overlay measurements for x-ray lithography"

Cited by

US5443932A; EP0360272A3; EP0361934B1

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

**EP 0253349 A2 19880120**; **EP 0253349 A3 19880720**; **EP 0253349 B1 19930616**; DE 3623891 A1 19880128; DE 3786201 D1 19930722; JP H0770462 B2 19950731; JP S6331117 A 19880209; US 4825086 A 19890425

DOCDB simple family (application)

**EP 87110093 A 19870713**; DE 3623891 A 19860715; DE 3786201 T 19870713; JP 17373887 A 19870710; US 7376087 A 19870715